Replace the paragraph beginning at page 1, line 10 with:

As a waveguide for allowing electromagnetic waves (hereinafter called "high-frequency waves") lying in microwave, millimeter-wave, and submillimeter wave bands to propagate, a hybrid waveguide comprising a combination of wave guides, metals and a dielectric have been used. An NRD (nonradiative dielectric) guide with a dielectric interposed between two metal plates has been used as a waveguide in which metals and a dielectric are utilized in combination. As known references, there are IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, VOL. MTT-29, NO. 11, NOVEMBER 1981, PP. 1188-1192, and IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, VOL. MTT-32, NO. 8, AUGUST 1984, PP. 943-946.

Replace the paragraph beginning at page 1, line 22 with:

While the NRD guide has the feature that no radiation loss is produced at a bent portion of a waveguide, propagation loss increases because it is used in the neighborhood of a cutoff frequency of the waveguide. In addition to this, a waveguide using a photonic band crystal structure has been placed under study as a waveguide low in radiation loss.

*IN THE CLAIMS*:

Replace the indicated claims with:

1. (Amended) A high-frequency waveguide comprising:

a first high-frequency reflecting wall including dielectric bars having lengths, each bar comprising a plurality of columnar bodies having respective axes and concentrically varying dielectric constants so that the dielectric constant on the axis is lower than off the axis, the dielectric bars being disposed in plural layers so that the axes of the dielectric bars describe corners of a regular polygon in a plane perpendicular to the axes;

a second high-frequency reflecting wall opposite, spaced from, and parallel to the first high-frequency reflecting wall, with a dielectric interposed between the first and second high-frequency reflecting walls, the second high-frequency reflecting wall including dielectric bars having lengths, each bar comprising a plurality of columnar bodies having respective axes and concentrically varying dielectric constants so that the dielectric constant on the axis is lower than off the axis, the dielectric bars being disposed in plural layers so that the axes of the dielectric bars describe corners of a regular polygon in a plane perpendicular to the axes; and

conductive plates which are opposite each other, with the first and second high-frequency reflecting walls interposed between the conductive plates and end faces of the dielectric bars of the first and second high-frequency reflecting walls connected to the conductive plates.

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5. (Amended) The high-frequency waveguide according to claim 1, wherein the dielectric interposed between the first high-frequency reflecting wall and the second high-frequency reflecting wall is air.

6. (Amended) The high-frequency waveguide according to claim 2, wherein the dielectric interposed between the first high-frequency reflecting wall and the second high-frequency reflecting wall is air.

7. (Amended) The high-frequency waveguide according to claims 1, including metal walls located outside the dielectric bars and corresponding to outermost layers of the first and second high-frequency reflecting walls.

8. (Amended) The high-frequency waveguide according to claims 2, including metal walls located outside the dielectric bars and corresponding to outermost layers of the first and second high-frequency reflecting walls.

9. (Amended) The high-frequency waveguide according to claims 3, including metal walls located outside the dielectric bars and corresponding to outermost layers of the first and second high-frequency reflecting walls.

10. (Amended) The high-frequency waveguide according to claims 4, including metal walls located outside the dielectric bars and corresponding to outermost layers of the first and second high-frequency reflecting walls.

11. (Amended) The high-frequency waveguide according to claims 5, including metal walls located outside the dielectric bars and corresponding to outermost layers of the first and second high-frequency reflecting walls.

12. (Amended) The high-frequency waveguide according to claims 6, including metal walls located outside the dielectric bars and corresponding to outermost layers of the first and second high-frequency reflecting walls.

13. (Amended) The high-frequency waveguide according to claim 7, wherein the metal walls respectively comprise metal bar arrays in which metal bars substantially identical in length to the dielectric bars are disposed along the dielectric bars.

14. (Amended) The high-frequency waveguide according to claim 8, wherein the metal walls respectively comprise metal bar arrays in which metal bars substantially identical in length to the dielectric bars are disposed along the dielectric bars.

15. (Amended) The high-frequency waveguide according to claim 9, wherein the metal walls respectively comprise metal bar arrays in which metal bars substantially identical in length to the dielectric bars are disposed along the dielectric bars.

16. (Amended) The high-frequency waveguide according to claim 10, wherein the metal walls respectively comprise metal bar arrays in which metal bars substantially identical in length to the dielectric bars are disposed along the dielectric bars.

17. (Amended) The high-frequency waveguide according to claim 11, wherein the metal walls respectively comprise metal bar arrays in which metal bars substantially identical in length to the dielectric bars are disposed along the dielectric bars.

18. (Amended) The high-frequency waveguide according to claim 12, wherein the metal walls respectively comprise metal bar arrays in which metal bars substantially identical in length to the dielectric bars are disposed along the dielectric bars.

19. (Amended) A method of manufacturing a high-frequency waveguide including :

laminating dielectric bars having lengths, each dielectric bar comprising a plurality of columnar bodies having respective axes and concentrically varying dielectric constants so that the dielectric constant is lower on the axis than off axis, in plural layers so that the axes of the dielectric bars describe corners of a regular polygon in a plane perpendicular to the axes thereby forming first and second high-frequency reflecting walls; and

placing the first and second high-frequency reflecting walls opposite each other, parallel to each other, and spaced from each other, placing conductive plates opposite each other, with the first and second high-frequency reflecting walls interposed between the conductive plates, and connecting the conductive plates to respective end faces of the dielectric bars of the first and second high-frequency walls.